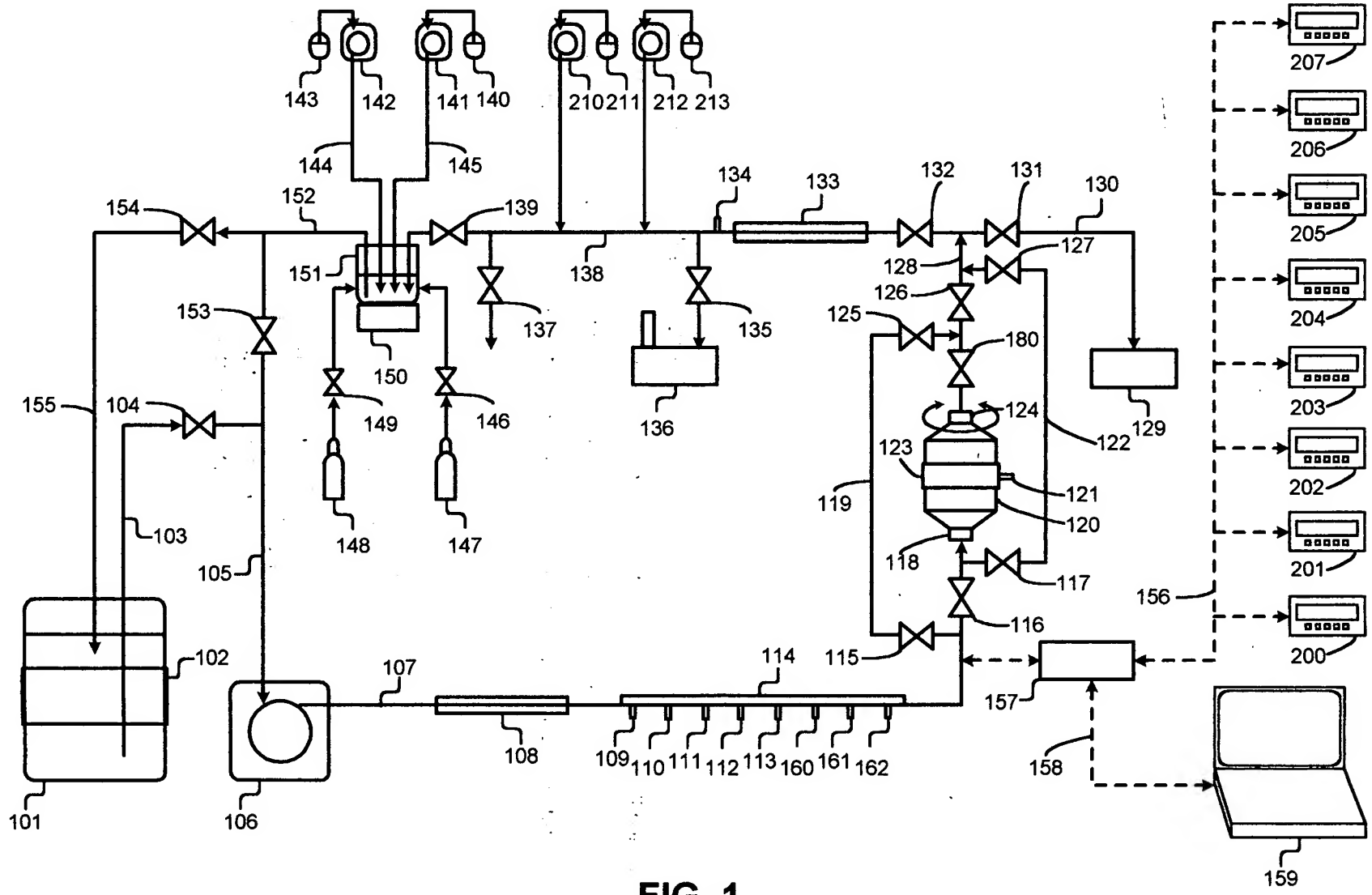
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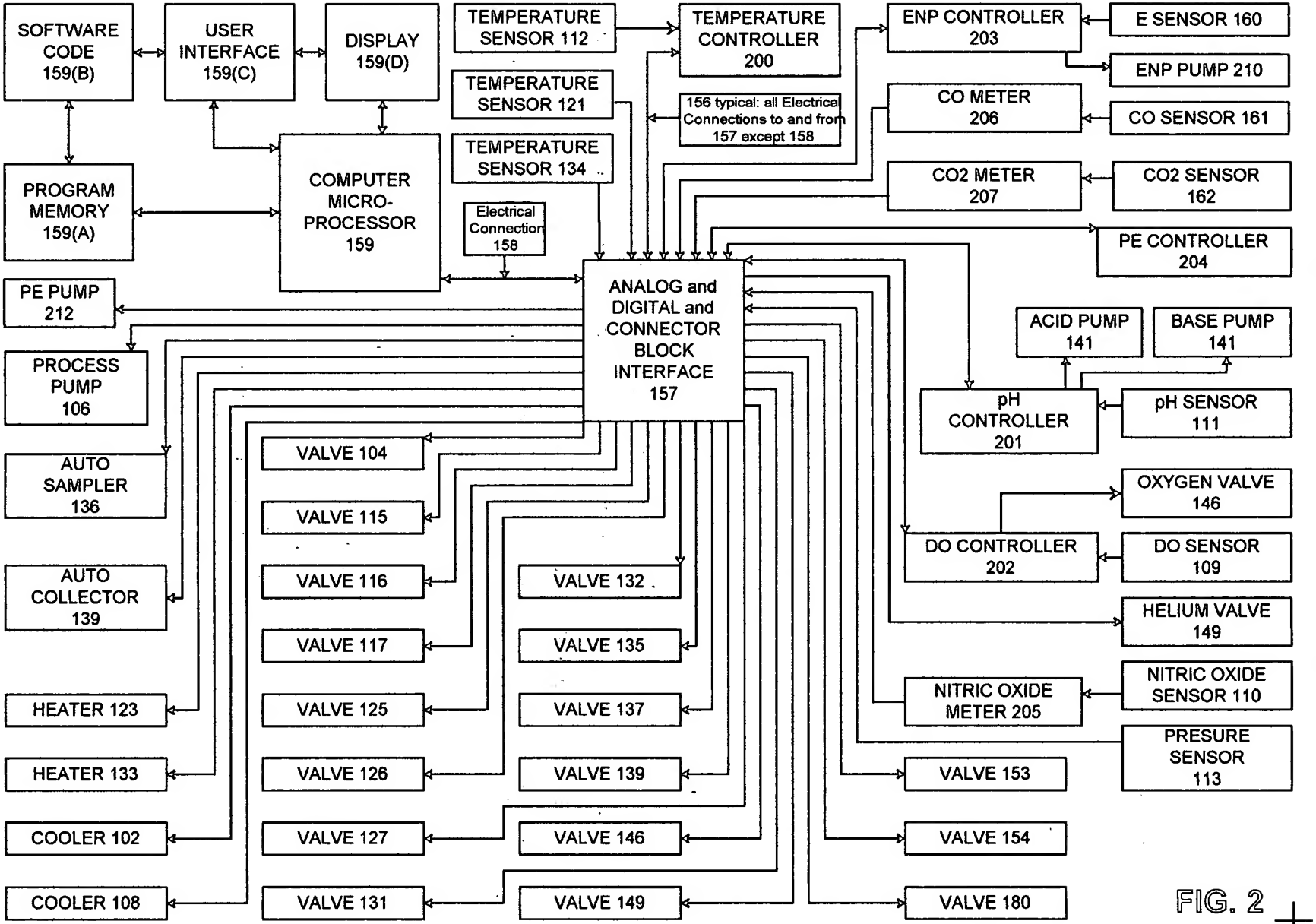
FIG. 1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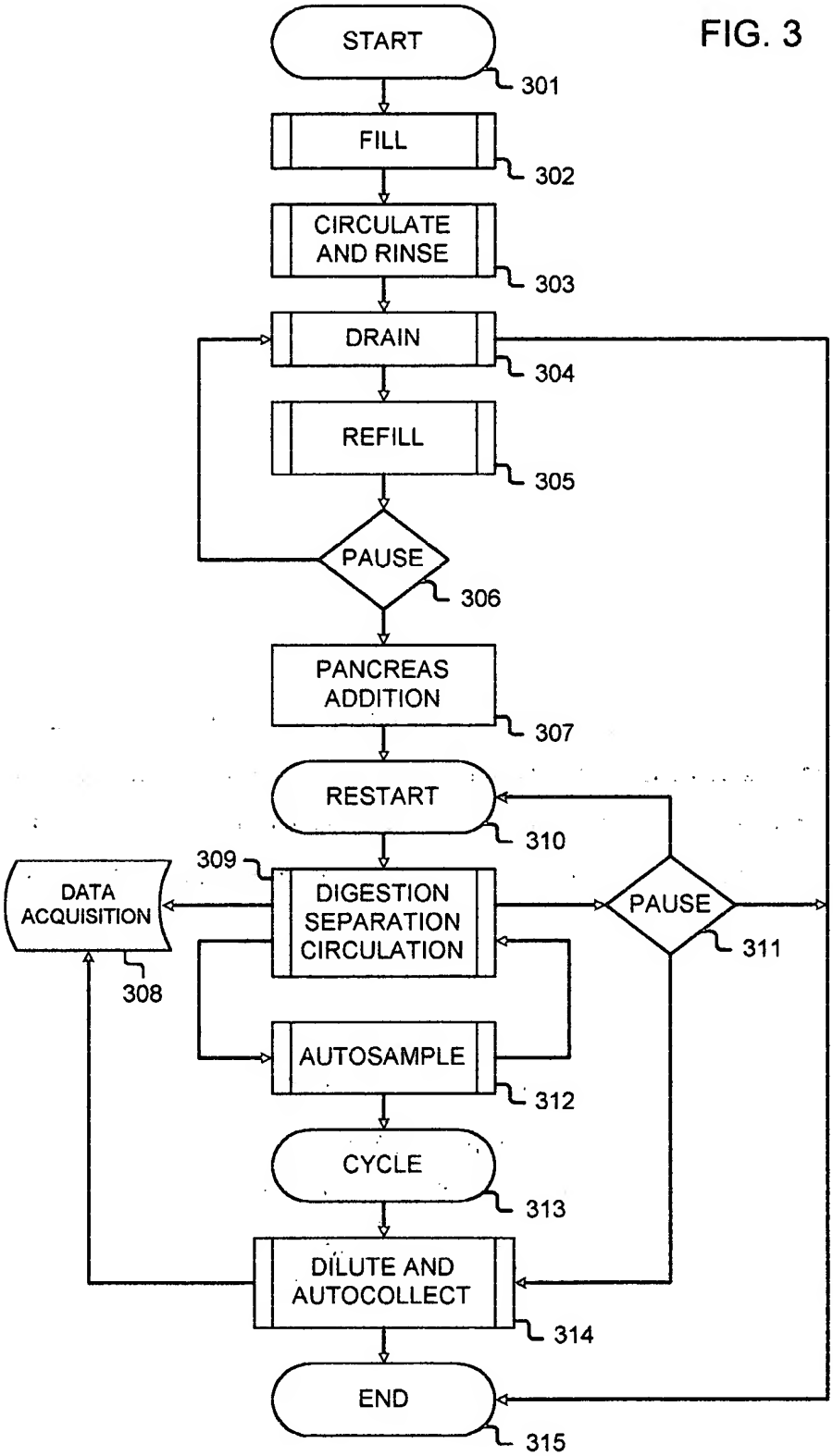
VALVE 125
VALVE 126
VALVE 127
VALVE 131
VALVE 132
VALVE 135
VALVE 137
VALVE 139
VALVE 146
VALVE 149
VALVE 153
VALVE 154
VALVE 180

FIG. 2

FIG. 3


START
301
FILL
302
CIRCULATE AND RINSE
303
DRAIN
304
REFILL
305
PAUSE
306
PANCREAS ADDITION
307
RESTART
310
309
DATA ACQUISITION
308
DIGESTION SEPARATION CIRCULATION
PAUSE
311
AUTOSAMPLE
312
CYCLE
313
DILUTE AND AUTOCOLLECT
314
END
315

AUTOMATED ISLET SEPARATION APPARATUS PROCESS CONTROL VALVE LOGIC

FIG. 4

ACTION (401)	STATE	VALVE
FILL	OPEN	104 116 126 132 139 154 180
	CLOSED	115 117 125 127 131 135 137 153
CIRCULATE AND RINSE	OPEN	116 126 132 139 153 180
	CLOSED	104 115 117 125 127 131 135 137 154
DRAIN	OPEN	104 116 126 132 137 180
	CLOSED	115 117 125 127 131 135 139 153 154
REFILL	OPEN	104 116 126 132 139 154 180
	CLOSED	115 117 125 127 131 135 137 153
PANCREAS ADDITION IN DYNAMIC FLOW DIGESTION CHAMBER	OPEN	115 125 126 132 139 153
	CLOSED	104 116 117 180 127 131 135 137 154
DIGESTION, SEPARATION AND CIRCULATION WITH DYNAMIC FLOW DIGESTION CHAMBER FORWARD FLOW	OPEN	116 126 132 139 153 180
	CLOSED	104 115 117 125 127 131 135 137 154
DIGESTION, SEPARATION AND CIRCULATION WITH DYNAMIC FLOW DIGESTION CHAMBER REVERSE FLOW	OPEN	115 117 125 127 132 139 153 180
	CLOSED	104 116 126 131 135 137 154
AUTOSAMPLE AND CIRCULATE	OPEN	116 126 132 135 139 153 180
	CLOSED	104 116 118 126 128 132 137 154
DILUTE AND COLLECT	OPEN	104 116 126 131 180
	CLOSED	115 117 125 127 132 135 137 139 153 154
OXYGEN SPARGING ON	OPEN	146
OXYGEN SPARGING OFF	CLOSED	146
HELIUM SPARGING ON	OPEN	149
HELIUM SPARGING OFF	CLOSED	149

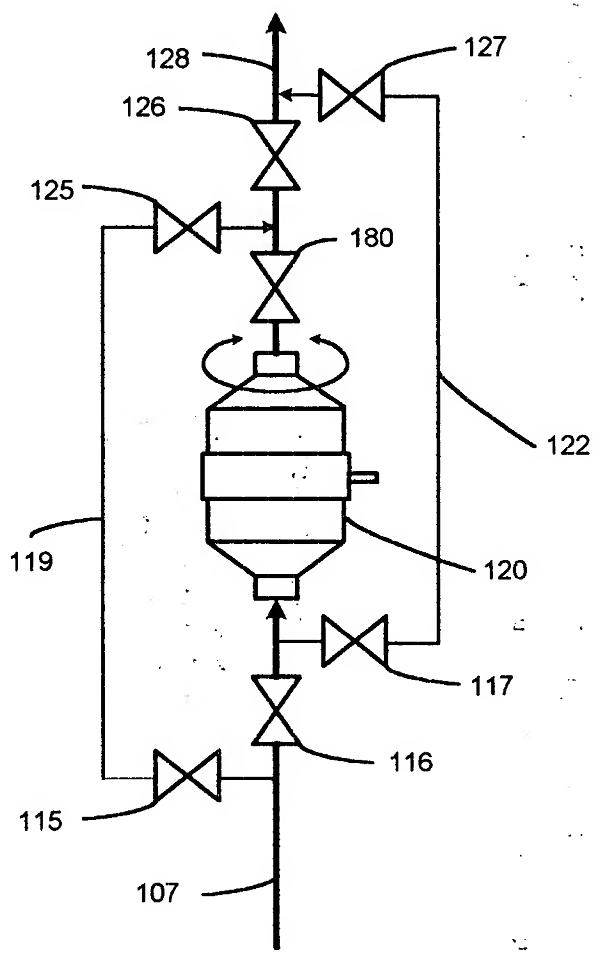

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FIG. 5

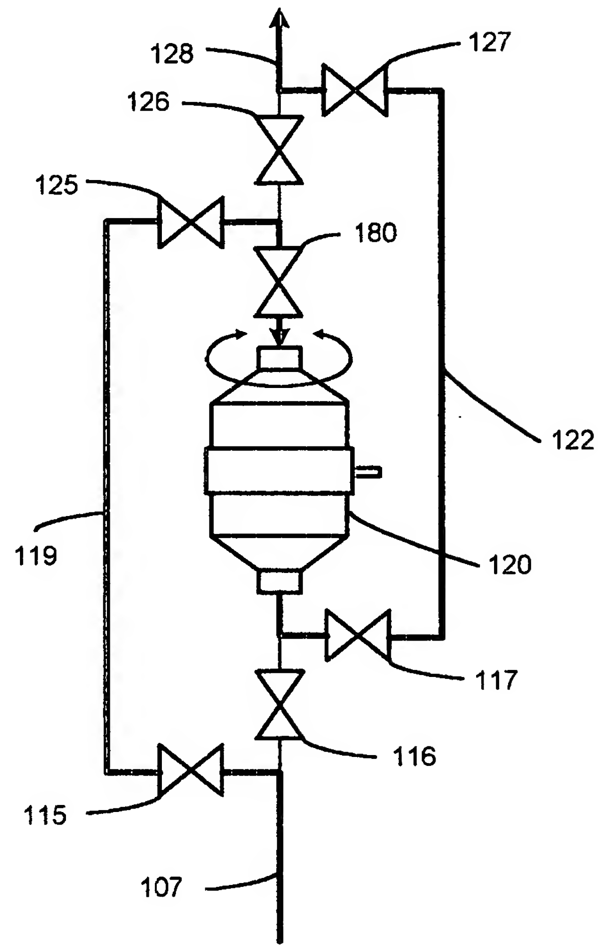
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FIG. 6